



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| | | | | |
|---|-------------|----------------------|---------------------|------------------|
| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/588,016 | 08/01/2006 | Friedbert Wechs | 2037.6 | 2114 |
| 29494 | 7590 | 07/14/2010 | | |
| HAMMER & ASSOCIATES, P.C. 3125 SPRINGBANK LANE SUITE G CHARLOTTE, NC 28226 | | | EXAMINER | |
| | | | BASS, DIRK R | |
| | | ART UNIT | PAPER NUMBER | |
| | | 1797 | | |
| | | | | |
| | | MAIL DATE | DELIVERY MODE | |
| | | 07/14/2010 | PAPER | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | |
|------------------------------|--------------------------------------|---|
| Office Action Summary | Application No. 10/588,016 | Applicant(s) WECHS, FRIEDBERT |
| | Examiner DIRK BASS | Art Unit 1797 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on **May 21, 2010**.
 2a) This action is **FINAL**. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) **1-12 and 14-18** is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) **1-12, 14-18** is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/GS-68)
 Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____
 5) Notice of Informal Patent Application
 6) Other: _____

DETAILED ACTION

Applicant's response filed May 21, 2010 is acknowledged. Claims 1-12 and 14-18 are pending and further considered on the merits.

Response to Amendment

In response to applicant's amendment, the examiner maintains and further clarifies the grounds of rejection set forth in the office action dated February 24, 2010.

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
2. **Claims 1-9, 12 and 14-18** are rejected under 35 U.S.C. 102(b) as anticipated by Scholander et al., US 5840190 (Scholander).
3. Regarding claims 1-4, 7-9, and 17, Scholander discloses a method for forming a membrane with at least one separating layer and a supporting layer (abstract, col. 3, l. 66 – col. 4, l. 32, and col. 4, l. 38 - col. 5, l. 10) comprising:
 - a. Preparation of a solution comprising either a cellulosic or polysulfonic membrane forming polymer and solvent system (col. 4, l. 38-50);
 - b. Conversion of the solution by means of a forming device into a shaped object with a first and a second surface (implicitly disclosed in col. 4, l. 38-50);
 - c. Bringing of the first and/or second surface in contact with a precipitant system comprising a polyelectrolyte, wherein the polyelectrolyte is acrylic acid (col. 4, l. 51-66) resulting in the formation of a membrane having a separating layer on the first and/or second surface (implicitly disclosed); and
 - d. Washing of the membrane (col. 5, l. 8-10).
4. Regarding claims 5-6, Scholander discloses a method characterized in that the proportion by weight of the polyelectrolyte relative to the weight of the precipitant system is 0.05 to 1 wt% (col. 4, l. 55-57).
5. Regarding claims 12 and 14, Scholander is relied upon in the rejections of claim 1 as set forth above.
6. Regarding claims 15-16, The limitations "wherein the membrane being for..." are deemed to be statements with regard to the intended use and are not further limiting in

so far as the steps of the method are concerned. In process claims, a claimed intended use must result in a ***manipulative difference*** between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. MPEP § 2111.02.

7. Regarding claim 18, Scholander is relied upon in the rejection of claims 1-4 as set forth above.

Claim Rejections - 35 USC § 103

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

9. **Claims 10-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Scholander.

10. Regarding claims 10-11, while Scholander fails to explicitly disclose the above method using a spinning technique comprising a hollow fiber die forming device, Scholander teaches that the membranes can be formed using casting, spinning, or similar methods (col. 4, l. 26-28). Scholander further teaches an example of preparing a spinning solution (Ex. 7) in which spinning techniques are used to form hollow fiber membranes.

11. At the time of invention, it would have been obvious to one skilled in the art to use a spinning technique since the examiner takes official notice of the equivalence of spinning techniques and casting techniques for their use in the membrane formation art and the selection of any of these known equivalents to form a membrane would be within the level of ordinary skill in the art (MPEP 2144.06).

Response to Arguments

12. Applicant's arguments with respect to claims 1-12 and 14-18 have been considered but are not persuasive.

13. Applicant argues that Scholander does not disclose specific features of independent claim 1. In response, the examiner directs applicant's attention to the rejection of claim 1 above. Scholander is shown to disclose a method comprising preparation of a solution comprising a membrane-forming polymer and solvent system (col. 4, l. 32-50), converting the solution into a shaped object (implicitly disclosed), using

a precipitant system comprising polyacrylic acid resulting in the formation of a membrane having a separating layer on the first and/or second surface (col. 4, l. 51-66) and washing the membrane (col. 5, l. 8-10). The examiner further obviates methods of using a forming device such as a hollow fiber die for forming hollow fiber membranes.

14. In response to applicants argument that Scholander does not disclose a step in which the first and/or second surface of a shaped object is brought into contact with a precipitant system, the examiner directs applicant's attention to column 5, l. 8-10 of the prior art. Scholander discloses a precipitated "surface modified membrane".

Furthermore, applicants merely claim conversion of a solution into a shaped object, and that at least one surface of said object is brought into contact with a precipitant system. Scholander is shown to disclose both of these claimed features in the method steps above.

15. Regarding applicant's arguments concerning the formation of an integrally asymmetric membrane, the examiner reminds applicant of the definition of an asymmetric membrane. An asymmetric membrane is a membrane in which the pore size and structure vary from one side of the membrane to the other. In light of this definition, the examiner considers the surface modified membrane of Scholander to be an asymmetric membrane. Moreover, since the steps of applicant's invention are disclosed in the prior art, it is inherent that the membrane formed in Scholander is an asymmetric membrane, even if there is no explicit recitation of an asymmetric membrane being formed.

Conclusion

16. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIRT BASS whose telephone number is (571) 270-7370. The examiner can normally be reached on Mon - Fri (9am-4pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vickie Kim can be reached on (571) 272-0579. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Krishnan S Menon/
Primary Examiner, Art Unit 1797

/DRB/
Dirk R. Bass